

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method performed by a mobile station in a wireless network, the method comprising:

determining a power savings level for [[a]] the mobile station based on an amount of data traffic[[.]] as a percentage of traffic activity in a current time interval;

determining, from the power savings level and a required wake-up time, a number of 802.11 compliant beacon intervals to sleep;

sleeping for the number of 802.11 compliant beacon intervals;

awaking to receive an 802.11 compliant beacon; and

if no 802.11 compliant beacon is received, sleeping for one additional 802.11 compliant beacon interval.

2. (Canceled)

3. (Canceled)

4. (Currently Amended) The method of claim [[3]] 1 wherein ~~determining a time interval for the mobile station to sleep comprises comparing a desired sleep interval and a the required wake-up time corresponds to a time to receive broadcast and multicast packets.~~

5. (Canceled)

6. (Currently Amended) The method of claim [[5]] 1 wherein the method is performed within a beacon monitor task run in response to an interrupt caused by a Target Beacon Transmission Times (TBTT) timer.

7. (Currently Amended) The method of claim [[5]] 1 wherein determining a time interval for the mobile station a number of 802.11 compliant beacon intervals to sleep comprises comparing a Delivery Traffic Indication Message (DTIM) count within a received beacon with a time interval associated with the power saving level.

8. (Currently Amended) A method comprising:

determining a desired sleep interval as a number of 802.11 compliant beacon intervals to sleep to save power, based on a volume of data traffic as a percentage of a current time interval;

determining a broadcast time to wake up to receive packets from an access point; and

setting a wake-up time based on the desired sleep interval and the broadcast time[[.]]; sleeping until the wake-up time:

waking to receive an 802.11 compliant beacon; and

if no 802.11 compliant beacon is received, sleeping for one additional 802.11 compliant beacon interval.

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Original) The method of claim 8 wherein determining a broadcast time comprises examining a Traffic Indication Map (TIM) element within an 802.11 compliant beacon.

13. (Original) The method of claim 8 wherein setting a wake-up time comprises setting the wake-up time to the end of one desired sleep interval when the broadcast time is more than two desired sleep intervals in the future.

14. (Original) The method of claim 8 wherein setting a wake-up time comprises setting the wake-up time to the broadcast time when the broadcast time is less than two desired sleep intervals in the future.

15. (Currently Amended) An apparatus having a machine-readable medium with instructions stored thereon that when accessed, result in a machine performing:

~~waking up a mobile station to receive a beacon;~~
~~evaluating traffic activity at a mobile station in a wireless network; and~~
~~setting a power savings level for the mobile station based on the traffic activity[.].;~~
~~setting a sleep time associated with the power savings level;~~
~~putting the mobile station to sleep for the sleep time;~~
~~waking up the mobile station to receive a beacon signal; and~~
~~if the beacon signal is not received, putting the mobile station to sleep for one beacon interval.~~

16. (Original) The apparatus of claim 15 wherein evaluating traffic activity comprises determining a percentage of traffic time over a time interval.

17. (Original) The apparatus of claim 16 wherein the power savings level may be set differently each time the traffic activity is evaluated.

18. (Canceled)

19. (Original) The apparatus of claim 15 wherein setting a power savings level comprises determining a number of beacon intervals for the mobile station to sleep.

20. (Currently Amended) The apparatus of claim 19 15 wherein setting a sleep time comprises determining a number of beacon intervals for the mobile station to sleep ~~comprises by~~ comparing a desired number of beacon intervals with a Delivery Traffic Indication Message (DTIM) count.

21. (Currently Amended) An apparatus configured to communicate in an 802.11 wireless network, ~~and configured to sleep for a number of beacon intervals based on traffic volume, to awake to receive a beacon, and to sleep for one additional beacon interval if a beacon is not received.~~
22. (Original) The apparatus of claim 21 comprising a network interface card.
23. (Original) The apparatus of claim 21 comprising a mobile computer.
24. (Currently Amended) An electronic system comprising:
 - a plurality of antennas;
 - a radio interface coupled to the plurality of antennas;
 - a processor coupled to the radio interface; and
 - a static random access memory with instructions stored thereon that when accessed, result in the processor performing:
~~waking up an apparatus to receive a beacon, evaluating traffic activity at the radio interface, and setting a power savings level for the apparatus radio interface based on the traffic activity[[.]], setting a sleep time associated with the power savings level, putting the radio interface to sleep for the sleep time, waking the radio interface to receive a beacon signal, and putting the radio interface back to sleep for one beacon interval if a beacon signal is not received.~~
25. (Canceled)
26. (Currently Amended) The electronic system of claim 25 ~~24~~ wherein ~~setting a sleep time comprises~~ determining a time interval for the apparatus to sleep ~~comprises by~~ comparing a desired sleep interval and a required wake-up time to receive multicast packets.
27. (Currently Amended) The electronic system of claim 25 ~~24~~ wherein the ~~sleep time interval for the apparatus to sleep~~ is expressed as a number of beacon intervals.